SOXHLET EXTRACTION by EPA 3540C REVISION 3 DECEMBER 1996

Facility Name:_____VELAP ID_____

Assessor Name:_____Analyst Name:_____Inspection Date_____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst:_____ Sample ID: _____ Date of Sample Preparation:_____ Date of Analysis:_____					
Was sodium sulfate (Na_2SO_4) either heated at 400°C for 4 hours or precleaned with methylene chloride prior to use?	5.3				
If Na_2SO_4 was precleaned with methylene chloride, did method blanks demonstrate that Na_2SO_4 was free from interferences?	5.3				
Were sediment/soil samples mixed thoroughly?	7.1.1				
Were only solids subjected to this extraction procedure?	7.1.2				
Were dry wastes amenable to grinding ground or sieved so that they could be passed through 1-mm holes?	7.1.3				
Were gummy, fibrous, or oily materials not amenable to grinding cut, shredded, or otherwise reduced in size to allow for mixing and maximum exposure of sample surfaces during extraction?	7.1.4				
When analytes were determined on a dry weight basis, were second portions of samples subjected to drying overnight at 105°C to determine the % dry weight? (The oven-dried portion may not be used for extraction.)	7.2				
Were weighed portions of sample blended with weighed portions of anhydrous sodium sulfate?	7.3				
Were surrogate standard solutions and any matrix spiking solution added onto the samples at this point?	7.3.1 7.3.2				
Were sample sodium sulfate blends extracted with extraction solvent for 16 – 24 hours at 4-6 cycles per hour?	7.4				
Were soil/sediment and aqueous sludges extracted with either 1:1 Acetone/Hexane or 1:1 methylene chloride/acetone?	5.4.1				
Were other samples extracted with either methylene chloride or 10:1 toluene/methanol?	5.4.2				
Notes/Comments:					

SOXHLET EXTRACTION by EPA 3540C REVISION 3 DECEMBER 1996

Facility Name:_____VELAP ID_____

Assessor Name:_____Analyst Name:_____Inspection Date_____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst:_____ Sample ID: _____ Date of Sample Preparation:_____ Date of Analysis:_____					
Were extracts dried by passing through drying columns containing anhydrous sodium sulfate?	7.8				
Were extracts next concentrated?	7.9				
If necessary, were solvent exchanges as indicated by Table 1 of the reference method followed by another concentration step?	7.10				
Were any reagent blanks, matrix spikes, and duplicate samples subjected to all the same procedures as samples?	8.1				
Notes/Comments:					

TABLE 1

SPECIFIC EXTRACTION CONDITIONS FOR VARIOUS DETERMINATIVE METHODS

Determinative method	Extraction pH	Exchange solvent for analysis	Exchange solvent for cleanup	Volume of extract for cleanup (mL)	Final extract volume for analysis (mL)[a]
8041	as received	2-propanol	hexane	1.0	1.0, 0.5[b]
8061	as received	hexane	hexane	2.0	10.0
8070	as received	methanol	methylene chloride	2.0	10.0
8081	as received	hexane	hexane	10.0	10.0
8082	as received	hexane	hexane	10.0	10.0
8091	as received	hexane	hexane	2.0	1.0
8100	as received	none	cyclohexane	2.0	1.0
8111	as received	hexane	hexane	2.0	10.0
8121	as received	hexane	hexane	2.0	1.0
8141	as received	hexane	hexane	10.0	10.0
8270[c]	as received	none	-	-	1.0
8310	as received	acetonitrile	-	-	1.0
8321	as received	methanol	-	-	1.0
8325	as received	methanol	-	-	1.0
8410	as received	methylene chloride	methylene chloride	10.0	0.0 (dry)

[a] For methods where the suggested final extract volume is 10.0 mL, the volume may be reduced to as low as 1.0 mL to achieve lower detection limits.

[b] Phenols may be analyzed by Method 8041, using a 1.0-mL 2-propanol extract by GC/FID. Method 8041 also contains an optional derivatization procedure for phenols which results in a 0.5-mL hexane extract to be analyzed by GC/ECD.

[c] The specificity of GC/MS may make cleanup of the extracts unnecessary. Refer to Method 3600 for guidance on the cleanup procedures available if required.

METHOD 3540C
SOXHLET EXTRACTION